

REMARKS

Claim 36 has been amended to tie it directly back to claim 1, which resolves the objection.

The applicant appreciates the specificity of the information provided by the examiner relative to the application of the prior art reference to claim 1, as well as the comments on applicant's prior arguments. This has helped to focus the applicant on specific points, as follows.

The applicant will focus on the disclosure in the section of the reference paper entitled "Aerosol Retrieval." To begin, the first three sentences of the last paragraph of that section of the paper describe an "alternative" to the method described in the prior two paragraphs of the same section of the paper. This alternative method is based on an entirely different premise than the method described in the prior paragraphs. That is, this method can be used when there are no surfaces in the image with reflectances that are known *a priori*; such *a priori* knowledge is the entire basis for the first method, as it is necessary in order to take such first step. On the face of the reference, then, the two methods have different bases. Since the first method makes its first calculations using the known reflectances, and in the second method there are not known reflectances, it is clear on the face of the reference that the first and second methods are different. More specifically, the first calculation in the first method, on which the rest of the first method is based, can *only* be made if there is an already-known surface reflectance in the image.

As these two prior art methodologies have entirely different bases, on the face of the reference there cannot be any suggestion to mix the steps of the two methods. The examiner's application of the reference paper to claim 1 takes portions from each of these two methods and combines them in order to accomplish claim 1. As the reference teaches that any such combination is improper, the rejection is improper.

For the sake of argument, even if it would be proper to combine the steps of the two prior art methodologies described in this section of the paper, the combination does not teach each step of claim 1, so the reference cannot be used to reject the claim under either 35 U.S.C. 102 or 103.

The applicant has added letter designations to the steps of claim 1 in order to make the following easier to follow. The examiner has concluded that step “d” is taught regarding the calibration panels (which are only used in the first prior art method described in the second and third paragraphs of the subject section of the prior art paper). However, the paper directly describes in the second paragraph of the subject section that the calibration panels provide known surface reflectances. This is not the same as what is set forth in this claim step, namely that pixels having unknown reflectances but presumed *ratios* of reflectances among two or more wavelength bands are selected. In fact, as the first prior art method depends *entirely* on there being pixels with *known* reflectances, this prior art method absolutely could not even begin based on selection of pixels with unknown reflectances but a presumed reflectance ratio among two or more different wavelength bands. Accordingly, the reference does not teach step “d” of claim 1.

Also, step “f” of claim 1 is not disclosed by the reference. This step describes a comparison of determined reflectances to the predefined ratio of reflectances. The examiner has pointed to Figure 2 of the reference for teaching this element. However, Figure 2 is simply a plot of calculated reflectance vs. range; it makes no mention or use of the predefined reflectance *ratios* in two different wavelength bands. Indeed, as described above, this first prior art method does not use and *could not use* this predefined reflectance ratio approach. Accordingly, it is not possible to interpret Figure 2 (which is a plot of data from this first prior art method) to teach anything about the claim step of comparing determined reflectances to this ratio.

The only mention of this ratio is in the last paragraph of this section of the prior art paper, but the paper does not describe any method using this ratio that bears any real relationship to the claimed method. And, as stated above more than once, the other prior art method cannot use this ratio approach.

In conclusion, the reference does not teach each step of claim 1. Further, the reference describes two incompatible prior art methodologies, neither of which discloses the steps of claim 1, which cannot be combined under the law of 35 U.S.C. 103, and even if combined do not teach each step of claim 1. Accordingly, the claims must be patentable in light of the reference.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts, (508) 898-1501.

Respectfully submitted,



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